

ABSTRACT OF THE DISCLOSURE

According to the present invention, a filter size is increased, and the degree of freedom for a filtering process is increased, making it possible to design

5 a filter such that a contrast is enhanced or damped for each finer bandwidth in a frequency region.

In addition, a filter coefficient set stored in a ROM is configured in size that is  $1/4$  of the filter size. Namely, as a method for storing a coefficient of

10 a large filter size, when a filter is divided into four quadrants, symmetry is provided to each coefficient belonging to one of these quadrants such that coincidence is obtained when the adjacent other quadrants are returned. In this manner, data in amount that

15 corresponds to that of one of the above quadrants (including the remaining portion if the filter cannot be divided into four sections), thereby reducing a storage capacity.